

# C2C Scale and Systems with Confidence Rating

## Background Information

### 1. Personal Information:

Name:

Teacher:

### 2. School:

☐ William S. Cohen Middle School

☐ UTC

☐ Reeds Brook Middle School

☐ Hermon High School

☐ Hermon Middle School

☐ Old Town High School

☐ James F. Doughty Middle School

☐ Bangor High School

☐ Leonard Middle School

☐ Hampden Academy

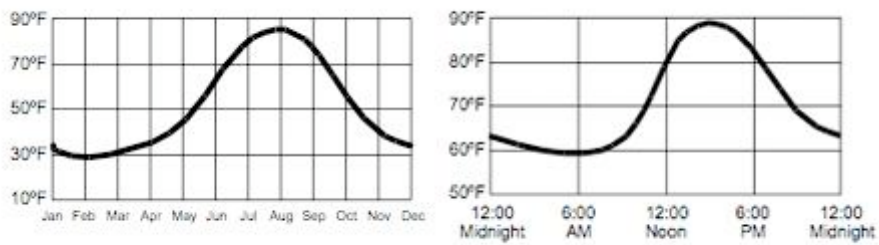
Other (please specify)

### 3. Create your "identification code":

**Enter month and day of your birthday followed by first and last initials. For example Hannah Montana was born on November 23rd, so her identification code is 1123HM.**

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## Scale and Climate



### 4. What differs between the graphs shown above?

- ☐ a. Nothing, they are the same.
- ☐ b. The time scale
- ☐ c. The temperature scale
- ☐ d. Both b and c
- ☐ e. The shape of the curve

### 5. How sure were you on your answer for the previous question?

Choose one: ☐ Very sure ☐ Somewhat sure ☐ A little bit sure ☐ I'm guessing

### 6. Scientists think which of the following has affected Earth for billions of years?

- ☐ a. Flowing water, such as rivers.
- ☐ b. Weathering processes.
- ☐ c. Earthquakes and volcanic eruptions.
- ☐ d. a, b, and c have all affected Earth for billions of years.
- ☐ e. None of the above has affected Earth for that long.

### 7. How sure were you on your answer for the previous question?

Choose one: ☐ Very sure ☐ Somewhat sure ☐ A little bit sure ☐ I'm guessing

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## 8. Rank the following in order of size: 1=smallest 5=largest

	Smallest--1	2	3	4	Largest--5
a. The Planet Mars	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
b. The continent of Africa	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
c. The Solar System	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
d. The State of Texas	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
e. The total area of oceans on Earth	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>

## 9. How sure were you on your answer for the previous question?

	Very sure	Somewhat sure	A little bit sure	I'm guessing
Choose one:	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>

## 10. How often does each of the following occur?

	Daily	Weekly	Monthly	Yearly	Every several years
a. A full moon	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
b. Eating lunch	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
c. Showing "Survivor" on TV	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
d. Graduating from a school	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
e. Having a birthday	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>

## 11. How sure were you on your answer for the previous question?

	Very sure	Somewhat sure	A little bit sure	I'm guessing
Choose one:	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>

## 12. On which time scale do each of the following changes occur?

	One day	One year	Decades or centuries	Thousands of years	Millions of years
a. An ice age comes and goes.	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
b. The four seasons pass.	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
c. The sea floor spreads to create the Atlantic Ocean.	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
d. The sun rises and sets.	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
e. Erosion changes the path of a meandering river.	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>

## 13. How sure were you on your answer for the previous question?

	Very sure	Somewhat sure	A little bit sure	I'm guessing
Choose one:	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>

# C2C Scale and Systems with Confidence Rating

## Systems and Climate

**14. Which of the following is an example of an ecosystem?**

- ☐ a. A city
- ☐ b. A forest
- ☐ c. An aquarium
- ☐ d. a and b only
- ☐ e. a, b and c

**15. How sure were you on your answer for the previous question?**

Very sure

Somewhat sure

A little bit sure

I'm guessing

Choose one:

☐☐☐☐

**16. A piece of rock contains some carbon atoms. Which of the following would a scientist agree might have contained these exact same carbon atoms 100 million years ago?**

- ☐ a. A dinosaur.
- ☐ b. Carbon dioxide gas in the air.
- ☐ c. A tree.
- ☐ d. Any of the above is possible.
- ☐ e. None of the above; the carbon atoms can only have been part of the rock.

**17. How sure were you on your answer for the previous question?**

Very sure

Somewhat sure

A little bit sure

I'm guessing

Choose one:

☐☐☐☐

**18. Which of the following is NOT a part of the water cycle?**

- ☐ a. Snow falling from clouds.
- ☐ b. Water evaporating from the ocean.
- ☐ c. Water absorbed by plants.
- ☐ d. Water in the ground.
- ☐ e. All of the above are part of the water cycle.

**19. How sure were you on your answer for the previous question?**

Very sure

Somewhat sure

A little bit sure

I'm guessing

Choose one:

☐☐☐☐

## C2C Scale and Systems with Confidence Rating

### 20. Earth's climate system is affected by changes in:

- ☐ a. Ocean currents.
- ☐ b. Earth's orbit.
- ☐ c. Greenhouse gases in the atmosphere.
- ☐ d. Movement of continental plates.
- ☐ e. All of the above.

### 21. How sure were you on your answer for the previous question?

	Very sure	Somewhat sure	A little bit sure	I'm guessing
Choose one:	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

### 22. Energy is transferred through which of the following systems:

- ☐ a. The food chain
- ☐ b. Earth's climate system
- ☐ c. Human circulatory system
- ☐ d. Both a and b
- ☐ e. All of the above

### 23. How sure were you on your answer for the previous question?

	Very sure	Somewhat sure	A little bit sure	I'm guessing
Choose one:	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

## C2C Scale and Systems with Confidence Rating

### You're finished!

Thank you!

Acknowledgements:

Many of the questions on this survey were developed by the MOSART (Misconceptions-Oriented Standards-based Assessment Resources for Teachers) Team led by Dr. Phil Sadler, Harvard-Smithsonian Center for Astrophysics. See [http://www.cfa.harvard.edu/smgphp/mosart/about\\_mosart.html](http://www.cfa.harvard.edu/smgphp/mosart/about_mosart.html) for more information.